3.2.8 Overview of the Permit/Site Specific Permits/Monitoring and Reporting Frequency

Applicability:

This is general guidance regarding the checking, measuring, observing and reporting applicable to all permits, both domestic and industrial.

Content:

There are several types of requirements for observation, sampling, and reporting in site-specific permits:

- Sampling and reporting the characteristics of discharges
- Monitoring and reporting related to facility operations and management of residuals
- Observing and reporting related to changes of facility status

These monitoring and reporting requirements are based on State and Federal regulatory provisions (see Legal References below). The methods for determining monitoring and reporting frequencies in a permit are covered in Chapter 6 and Appendix U of this permit manual. The monitoring frequency for many facilities is subject to regulatory minimums detailed in the Effluent Regulation, 10 CSR 20-7.015. Appendix U provides guidance on determining when to require more frequent monitoring than regulatory minimums. It also provides guidance on establishing frequencies not covered in the Effluent Regulation.

A facility's own sampling and reporting of its effluent is the most commonly recognized form of monitoring and reporting. All wastewater treatment facilities, water contaminant sources, or point sources that have a Missouri State Operating Permit (NPDES Permit) must sample and report the characteristics of the effluent. The schedule or frequency for monitoring and reporting is specified in the permit and is determined primarily based on the provisions of the Effluent Regulation. The provisions of the Effluent Regulation provide guidance for the development of relatively standardized schedules of monitoring based on the receiving stream and facility size. It also allows permit writer discretion in establishing monitoring frequency and sampling types to fulfill site-specific information needs of the state.

For domestic wastewater treatment facilities, the minimum parameters that must be monitored are flow, BOD_5, TSS, pH, and ammonia. Other parameters, such as bacteria, should be added depending on the nature of the receiving stream. For Publicly Owned Treatment Works (POTWs) the permit writer must add additional parameters when there is reasonable potential to violate water quality standards. Parameters for industrial wastewater permits will depend on the nature of the wastewater discharged. When the permit writer determines that a discharge causes, or has the reasonable potential to cause, or contribute to, an in-stream excursion from the allowable ambient concentrations stated in the Water Quality Standard for an individual pollutant, the permit must contain effluent limits for that pollutant. In-stream monitoring should not be required in most cases; effluent limits must be established to protect water quality standards. Instances where instream monitoring may be necessary include:

- To document the performance of a device that influences mixing, such as a diffuser.
- To gather additional data needed to support development of a TMDL. This is required when the facility in question has caused or contributes to the impairment of the stream.
- To document recovery of a formerly impaired stream, as in cases where the permit was drafted as a Permit in Lieu of a TMDL.

Reports of the characteristics of facility effluent, commonly called discharge monitoring reports (DMRs), may be submitted monthly, quarterly, semi-annually, or annually depending on the site-specific conditions.

Whole Effluent Toxicity (WET) testing is required for many facilities to document they are not violating water quality standards pertaining to toxicity.

Facilities also may be required to sample and report the characteristics of storm water and other periodic discharges. Monitoring should be based on the potential water quality effect and volume of the discharge. Sampling storm water and other periodic discharges should be at a frequency of at least once per quarter unless more frequent sampling is needed for adequate characterization of the effluent's effects or for modeling purposes. Reporting may be required annually, quarterly, or monthly. The permit writer determines sampling and reporting frequency for monitoring of discharges related to precipitation events or irregular wastewater releases.

Standard reporting forms have been developed for the various types of discharges from facilities. The department will develop a site-specific monitoring report called a Discharge Monitoring Report (DMR). The permittee may also develop a site-specific monitoring report form and obtain approval from the department to use the form officially. A WET test report form is used by all facilities with the requirement.

Industrial facilities can utilize or modify a domestic wastewater monitoring report, or report information about their discharges on a self-developed form approved by the department. The WET test report form is used by all facilities with the requirement.

Permittees are also required to report information related to facility operations and the management of residuals, including land application or other disposals of wastewater and sludge (biosolids). These requirements are based on provisions of the permit, effluent regulations, and water quality standards.

Domestic wastewater treatment facilities may also be subject to operational monitoring requirements found in 10 CSR 20-9.010. This information may be required to be reported to the department but must be maintained at the facility and made available to the department. No-discharge permit facilities must report, at a minimum, wastewater amounts that are land applied, storage lagoon characteristics, weather conditions in particular precipitation amounts, sludge disposal practices, and information about the soils and crops grown at irrigation sites. The various sections of Form S require detailed information about domestic and industrial sludge (biosolids) management and disposal.

Facilities are required to report the following information:

- Planned physical alterations of the facility
- Anticipated noncompliance
- Transfers of the permit to another person or organization
- Conformance with compliance schedule milestones
- Noncompliance that endangers human health or the environment within 24 hours of the event
- Noncompliance related to unanticipated bypasses and plant upsets within 24 hours of the event
- Violations of maximum daily effluent limits for selected pollutants within 24 hours of the event if listed in the permit
- All other noncompliance at the time the DMR is filed
- New introduction of pollutants or substantial changes in nondomestic pollutants already being received at the facility.

Regulatory provisions related to these reporting requirements are in 10 CSR 20-6.010(8) and various federal regulations, including 40 CFR 122.41(l), 122.44(g) and 122.48.

Legal References:

Code of State Regulations:

10 CSR 20-6.010(8)(A)	Construction and Operating Permits – Terms and Conditions of Permits
10 CSR 20-7.015	Water Quality – Effluent Regulations
10 CSR 20-7.031	Water Quality – Water Quality Standards

Code of Federal Regulations:

40 CFR 122.41	Conditions Applicable to All Permits
40 CFR 122.44	Establishing Limitations, Standards, and Other Permit Conditions
40 CFR 122.48	Requirements for Recording and Reporting of Monitoring Results